

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the application of: Solar Cell Module) Atty Dkt. TOR.011.0001.NP
)
Inventor: Sadaji Tsuge) Confirmation No.: 1063
)
Serial No.: 09/788,339) Examiner: Barton, Jeffrey Thomas
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Filing or 371(c) Date: 2/21/2001) Art Unit: 1753

Honorable Commissioner for Patents
Alexandria, Virginia 22313-1450

REPLY BRIEF

This is a reply to the new points of argument in the Examiner's Answer dated June 18, 2009, pursuant to 37 CFR § 41.41.

ARGUMENT

The 35 U.S.C. § 103 Rejections Are Improper and Should Be Reversed

(1) JP 11-307791 in view of Yamagishi et al., Brandhorst, Jr., Spitzer, Mitsui and the instant disclosure;

The rejection of claims 16, 18-20, 23 and 24 as being unpatentable over JP 11-307791 ("JP '791") in view of Yamagishi et al., Brandhorst, Jr., Spitzer, Mitsui, and the instant disclosure are improper and should be reversed.

As in the final rejection, the Examiner's Answer selectively picks and chooses various isolated and individual elements from various disparate prior art references in a hindsight attempt to recreate the claimed invention. Of particular note is the need to dismantle and then rebuild the entire structure of the base JP '791 reference in an attempt to recreate the invention set forth in claim 16. See Answer at 6 – 7 ("to take the solar cell in JP '791's Figure 2, flip it over it over (*sic*), and then insert into it JP '791's Figure 1, would have been within the level of ordinary skill in the art").

As acknowledged in the Answer, “JP ‘791 does not explicitly teach that the resin adhering the light incidence side light transmitting member at the light incidence side of the solar cell element contains sodium ion, nor does the reference explicitly disclose that a one conductive type crystalline semiconductor substrate is disposed between the semiconductor junction and the resin containing the sodium ion.” Answer at 4. Thus, in order to support the proposed modification of JP ‘791, the Answer must first create a problem in the ‘791 device that does not exist, namely the presence of a sodium ion in the resin for adhering the incident light transmitting member at the light incidence side of the solar cell element.

Further, the alleged basis for the proposed inversion, dismantling and rebuilding of the JP ‘791 device, “because light can enter from both sides of JP ‘791’s solar cell in Figure 2, and thus, the p-i-n junction can be closer to either the light transmitting member 3 or the rear surface member 4; JP ‘791 is not limited to layers 12 and 13 to be at the front surface; and the presence of a photovoltaic junction at the rear face of a solar cell is well known in the art as shown by Brandhorst, Jr and Spitzer,” does not constitute a proper basis for an obviousness determination under 35 U.S.C. § 103. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). A statement that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. Ex parte Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). See also In re Kotzab, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000). Here, the Examiner’s Answer articulates no objective reason at all for the proposed modification of the JP ‘791 reference.

The Answer further improperly attempts to equate the lack of an explicit structural requirement in the JP ‘791 reference with a teaching or suggestion to support the proposed modifications of the JP ‘791 reference. See Answer at 6 (“JP ‘791 does not require said one principal plane . . . to be the front face;” “JP ‘791 does not require layers

12 and 13 to be at the front surface and layers 16 and 17 to be at the rear face.”). Thus, merely from the observation that JP ‘791 allegedly “is not limited” to the disclosed structure and allegedly “does not require” the disclosed structure, the Answer concludes that the proposed complete reconfiguration and restructuring of the disclosed JP ‘791 structure would have been obvious. Alleged lack of an explicit statement that the disclosed structure is “required,” does not equate to a reason, teaching, or suggestion from which one of ordinary skill in the art would have been motivated to make the purported modifications suggested by the Answer.

Remarkably, the Answer at page 16 does not deny that the conclusions of obviousness rest on “a reconstruction based on hindsight reasoning.” The Answer attempts to improperly shift the burden to Appellants to provide “specific arguments against the motivations that are provided for the modifications to the primary reference.” The burden is on the Examiner in the first instance to establish the obviousness of the proposed modifications. Here, the Answer has simply concluded that it would have been obvious to do what Appellants have done, which, according to the Answer, requires disassembly of the prior art devices as disclosed, and complete rearrangement of parts and reconstruction so as to meet the limitations of the claimed invention. No motivation has been provided for such reconstruction, other than unsupported assertions and conclusions.

(2) Brandhorst, Jr., in view of Mitsui and the instant disclosure are Improper

The rejection of claims 16, 18-20 and 22 as being unpatentable over Brandhorst, Jr. in view of Mimura et al., Mitsui and the instant disclosure is improper and should be reversed. The Answer acknowledges that Brandhorst, Jr. “does not explicitly disclose the light incidence side light transmitting member, rear surface member, resin, or sodium ion present in the resin,” and that this reference “is silent concerning encapsulation of the cell.” Answer at 10. The Answer admits that even if modified as proposed, “the presence of sodium ions in the resin filler lying between the cells and the glass member must be considered inherent.” Answer at 11. Thus, the Answer has failed to establish even a *prima facie* showing that the proposed modification even meets the requirements of the claim. Further, the proposed modifications with the Mitsui and Mimura references

do not even address the limitations admitted to be missing from Brandhorst: “the light incidence side light transmitting member, [and] rear surface member.” Finally, the basis for the purported modification, that “Mimura suggests that any conventional cell is suitable for encapsulation in their system” (Answer at 11), does not constitute an objective reason for one skilled in the art to have sought to make the proposed combination of prior art references. Merely because a thing may be “suitable” for inclusion in a system does not equate to a suggestion or reason to include it in such system, without identification of any problem or shortcoming in that thing.

(3) Mimura in view of Brandhorst, Jr. in view of Mimura et al., Mitsui and the instant disclosure is Improper

The rejection of claims 16, 18-20 and 22 as being unpatentable over Mimura in view of Brandhorst, Jr., Mitsui and the instant disclosure is improper and should be reversed. According to this ground of rejection, the Answer acknowledges that Mimura fails to teach “a solar cell element comprising a one conductive type crystalline semiconductor substrate between the semiconductor junction and resin containing sodium ion,” but alleges it would have been obvious to modify Mimura “by specifically installing the solar cells of Brandhorst, Jr.” Answer at 14. But, the Answer previously acknowledged that Brandhorst, Jr. “does not explicitly disclose the light incidence side light transmitting member, rear surface member, resin, or sodium ion present in the resin,” and that this reference “is silent concerning encapsulation of the cell.” Answer at 10. Again, the Answer improperly relies on the teachings and disclosure of the present application regarding problems associated with sodium ion diffusion. Accordingly, this ground of rejection also is improper and must be reversed.

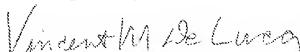
Finally, the Answer “disagrees” that Appellants’ specification has been improperly relied upon as an admission of prior art, citing the mention of a moisture proof test (JIS C8917). However, the specification clearly states that it is the invention that was made under the conditions set forth therein, wherein the moisture proof test was conducted by the inventors to determine the cause of degradation of power generation performance. The specification does not state, as alleged in the Answer, that the moisture proof test “results in sodium ion deposition into the sealing resin from the front glass.”

To the contrary, the specification clearly sets forth that it is the present inventors who discovered that sodium ions in the resin film cause the power degradation.

Conclusion

In view of the foregoing, and the arguments set forth in the main Appeal Brief, claims 16 and 18-20 and 22-24 are submitted to define patentable subject matter over the prior art of record, whether considered individually or in combination. The Honorable Board is requested to reverse all grounds of rejection as being improperly based and legally unfounded, and to direct passage of this application to allowance.

Respectfully submitted,



Vincent M DeLuca
Attorney for Appellants
Reg. No. 32,408

NDQM WATCHSTONE LLP
1300 Eye Street, N.W.
Suite 1000 West Tower
Washington, D.C. 20005
202-659-0100